

**Appendix D**  
**Comparison of Lower Fox River and**  
**API/PC/KR Exposure Concentrations**

Comparison of Lower Fox River and API / PC / KR Exposure Concentrations and Results of Risk/Hazard Scaling  
Changes from Outside Review

RME : Reasonable Maximum Exposure (represents high- and exposure)

CTE : Central tendency Exposure (represents more typical exposure)

For calculation of EPC : two calculations were performed

1) Upper bound measured concentration - the lower of the 95% UCL on the arithmetic mean or the max. detected conc. (whichever is lower)

2) Average measured concentration - arithmetic mean

3) For CDM estimated risk calculations are based on : CDM maximum = FR RME Upperbound concentration and risk ; CDM average = FR CTE average conc. and risk

Pathway	Fox River Statistical Analysis	Risk	Fox River PCB Conc. <sup>41</sup>	Units	Exceeded Cancer Risk / HI	Area	Kalamazoo Sed. Analysis	Kalamazoo PCB Conc. #1	Units	Estimated Kalamazoo Risk	Exceeded Cancer Risk / HI
<b>ingestion of fish</b>	Cancer RME - Upperbound Conc.	4.1E-03	5.783	mg/kg	Y	Green Bay	maximum	17.31	mg/kg	1.31E-02	Y
	Cancer RME - Average Conc.	3.0E-03	3.644	mg/kg	Y	Green Bay	average	7.6	mg/kg	8.91E-03	Y
	Cancer CTE - Average Conc.	4.3E-04	3.644	mg/kg	Y	Green Bay					
	NonCancer RME - Upperbound Conc.	1.1E+02	5.783	mg/kg	Y	Green Bay	maximum	17.31	mg/kg	1.71E+02	Y
	NonCancer RME - Average Conc.	8.1E+01	3.975	mg/kg	Y	Application to Little Rapids	average	7.6	mg/kg	4.89E+01	Y
	NonCancer CTE - Average Conc.	1.1E+01	3.975	mg/kg	Y	Application to Little Rapids					
<b>ingestion/dermal contact w/ surface water</b>	Cancer RME - Upperbound Conc.	1.3E-07	2.11E-05	mg/L		DePere to GB	maximum	7.10E-05	mg/L	3.51E-07	
	Cancer RME - Average Conc.	1.0E-07	2.16E-05	mg/L		DePere to GB	median	2.50E-05	mg/L	1.66E-07	
	Cancer CTE - Average Conc.	1.7E-08	2.16E-05	mg/L		DePere to GB					
	NonCancer RME - Upperbound Conc.	6.0E-03	1.11E-05	mg/L		Little Lake Butte des Morts	maximum	7.10E-05	mg/L	2.93E-02	
	NonCancer RME - Average Conc.	3.0E-03	1.11E-05	mg/L		Little Rapids to DePere	median	1.50E-05	mg/L	7.15E-03	
	NonCancer CTE - Average Conc.	1.0E-03	1.11E-05	mg/L		Little Rapids to DePere					
<b>No Sediment since anglers assumed to be wearing boots - covered in wader scenario</b>											
<b>substance ingestion of fish</b>	Cancer RME - Upperbound Conc.	4.00E-03	5.783	mg/kg	Y	Green Bay	maximum	17.31	mg/kg	1.80E-02	Y
	Cancer RME - Average Conc.	3.00E-03	3.644	mg/kg	Y	Green Bay	average	7.6	mg/kg	1.21E-02	Y
	Cancer CTE - Average Conc.	4.00E-04	3.644	mg/kg	Y	Green Bay					
	NonCancer RME - Upperbound Conc.	1.1E+02	5.783	mg/kg	Y	Green Bay	maximum	17.31	mg/kg	5.11E+02	Y
	NonCancer RME - Average Conc.	1.1E+02	3.975	mg/kg	Y	Application to Little Rapids	average	7.6	mg/kg	5.77E+01	Y
	NonCancer CTE - Average Conc.	3.0E+01	3.975	mg/kg	Y	Application to Little Rapids					
<b>ingestion/dermal contact w/ surface water</b>	Cancer RME - Upperbound Conc.	1.6E-07	2.11E-05	mg/L		DePere to Green Bay	maximum	7.10E-05	mg/L	4.72E-07	
	Cancer RME - Average Conc.	1.6E-07	2.16E-05	mg/L		DePere to Green Bay	median	2.50E-05	mg/L	2.78E-08	
	Cancer CTE - Average Conc.	2.1E-08	2.16E-05	mg/L		DePere to Green Bay					
	NonCancer RME - Upperbound Conc.	9.0E-03	1.11E-05	mg/L		Little Lake Butte des Morts	maximum	7.10E-05	mg/L	3.91E-02	
	NonCancer RME - Average Conc.	6.0E-03	9.20E-06	mg/L		Little Rapids to DePere	median	2.50E-05	mg/L	3.44E-03	
	NonCancer CTE - Average Conc.	2.0E-03	9.20E-06	mg/L		Little Rapids to DePere					
<b>No Sediment since anglers assumed to be wearing boots - covered in wader scenario</b>											
<b>drinking ingestion of w/ surface</b>	Cancer RME - Upperbound Conc.	1.1E-04	1.3	mg/kg	Y	Little Rapids to DePere	maximum	300	mg/kg	4.53E-02	Y
	Cancer RME - Average Conc.	1.3E-05	8.121	mg/kg	Y	Green Bay	average	59.3	mg/kg	1.94E-03	Y
	Cancer CTE - Average Conc.	1.4E-05	8.121	mg/kg	Y	Green Bay					
	NonCancer RME - Upperbound Conc.	4.3E+00	1.3	mg/kg	Y	Little Rapids to DePere	maximum	300	mg/kg	1.37E+03	Y
	NonCancer RME - Average Conc.	1.4E+00	8.541	mg/kg	Y	Application to Little Rapids	average	59.3	mg/kg	7.54E+01	Y
	NonCancer CTE - Average Conc.	4.9E-01	8.541	mg/kg	Y	Application to Little Rapids					
<b>ingestion/dermal contact w/ surface water</b>	Cancer RME - Upperbound Conc.	1.50E-08	2.11E-05	mg/L		DePere to Green Bay	maximum	1.10E-05	mg/L	4.42E-08	
	Cancer RME - Average Conc.	1.50E-08	2.16E-05	mg/L		DePere to Green Bay	median	1.50E-05	mg/L	1.97E-09	
	Cancer CTE - Average Conc.	4.30E-09	2.16E-05	mg/L		DePere to Green Bay					
	NonCancer RME - Upperbound Conc.	1.0E-03	1.11E-05	mg/L		Little Lake Butte des Morts	maximum	7.10E-05	mg/L	4.92E-03	
	NonCancer RME - Average Conc.	1.0E-03	1.11E-05	mg/L		Little Rapids to DePere	median	2.50E-05	mg/L		

Pathway

	Fox River Statistical Analysis	Risk	Fox River PCB Conc. <sup>41</sup>	Units	Exceeded Cancer Risk / III	Area	Kalamazoo Stat. Analysis	Kalamazoo PCB Conc. <sup>42</sup>	Units	Estimated Kalamazoo Risk	Exceeded Cancer Risk / III
	NonCancer CTE - Average Conc.	0									
Local Resident inhalation of indoor/outdoor air	Cancer RME - Upperbound Conc.	1.80E-07	2.40E-05	mg/L		DePere to Green Bay	maximum	1.20E-01	mg/L	9.00E-07	
	Cancer RME - Average Conc.	not looked at	---				average	7.50E-05	mg/L		
	Cancer CTE - Average Conc.	not looked at	---				95% UCL	1.00E-01	mg/L		
	NonCancer RME - Upperbound Conc.	1.80E+00	1.44E-05	mg/L	Y	Little Lake Butte des Morts	maximum	1.20E-01	mg/L	3.16E+01	Y
	NonCancer RME - Average Conc.	not looked at	---				average	7.50E-05	mg/L		
	NonCancer CTE - Average Conc.	not looked at	---				95% UCL	1.00E-01	mg/L		
recreational swimming ingestion/dermal contact w/surface water	Cancer RME - Upperbound Conc.	6.80E-08	2.41E-05	mg/L		DePere to Green Bay	maximum	7.10E-05	mg/L	2.00E-07	
	Cancer RME - Average Conc.	not looked at	---				median	2.50E-05	mg/L		
	Cancer CTE - Average Conc.	not looked at	---								
	NonCancer RME - Upperbound Conc.	1.10E-02	2.41E-05	mg/L		DePere to Green Bay	maximum	7.10E-05	mg/L	4.13E-02	
	NonCancer RME - Average Conc.	not looked at	---				median	2.50E-05	mg/L		
	NonCancer CTE - Average Conc.	not looked at	---								
ingestion/dermal contact w/sediment	Cancer RME - Upperbound Conc.	8.70E-08	5.527	mg/kg		Little Lake Butte des Morts	maximum	156	mg/kg		
	Cancer RME - Average Conc.	not looked at	---				average	3.7	mg/kg	5.82E-04	
	Cancer CTE - Average Conc.	not looked at	---				95% UCL	13.6	mg/kg	2.14E-07	
	NonCancer RME - Upperbound Conc.	3.5E-02	5.527	mg/kg		Little Lake Butte des Morts	maximum	156	mg/kg		
	NonCancer RME - Average Conc.	not looked at	---				average	3.7	mg/kg	1.67E-02	
	NonCancer CTE - Average Conc.	not looked at	---				95% UCL	13.6	mg/kg	6.15E-02	
recreational boating ingestion/dermal contact w/surface water	Cancer RME - Upperbound Conc.	7.80E-09	2.11E-05	mg/L		DePere to Green Bay	maximum	7.10E-05	mg/L	2.30E-08	
	Cancer RME - Average Conc.	not looked at	---				median	2.50E-05	mg/L		
	Cancer CTE - Average Conc.	not looked at	---								
	NonCancer RME - Upperbound Conc.	2.0E-03	1.44E-05	mg/L		Little Lake Butte des Morts	maximum	7.10E-05	mg/L	9.81E-03	
	NonCancer RME - Average Conc.	not looked at	---				median	2.50E-05	mg/L		
	NonCancer CTE - Average Conc.	not looked at	---								
ingestion/dermal contact w/sediment	Cancer RME - Upperbound Conc.	1.90E-07	5.527	mg/kg		Little Lake Butte des Morts	maximum	156	mg/kg		
	Cancer RME - Average Conc.	not looked at	---				average	3.7	mg/kg	1.27E-07	
	Cancer CTE - Average Conc.	not looked at	---				95% UCL	13.6	mg/kg	4.64E-07	
	NonCancer RME - Upperbound Conc.	2.50E-02	5.527	mg/kg		Little Lake Butte des Morts	maximum	156	mg/kg		
	NonCancer RME - Average Conc.	not looked at	---				average	3.7	mg/kg	1.67E-02	
	NonCancer CTE - Average Conc.	not looked at	---				95% UCL	13.6	mg/kg	6.15E-02	